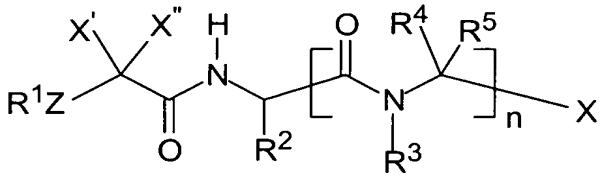
AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Original) A method for inhibiting β-amyloid peptide release and/or its synthesis in a cell which method comprises administering to such a cell an amount of a compound or a mixture of compounds effective in inhibiting the cellular release and/or synthesis of β-amyloid peptide wherein said compounds are represented by formula I:



I

wherein R^1 is selected from the group consisting of alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, substituted alkyl, substituted alkenyl, substituted alkynyl, aryl, heteroaryl and heterocyclic;

R^2 is selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, cycloalkyl, aryl, heteroaryl and heterocyclic;

each R^3 is independently selected from the group consisting of hydrogen and methyl and R^3 together with R^4 can be fused to form a cyclic structure of from 3 to 8 atoms which is optionally fused with an aryl or heteroaryl group;

each R^4 is independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aryl, cycloalkyl, cycloalkenyl, heteroaryl, heterocyclic, substituted alkyl, substituted alkenyl and substituted alkynyl;

each R^5 is selected from hydrogen and methyl or together with R4 forms a cycloalkyl group of from 3 to 6 carbon atoms;

X is selected from the group consisting of -C(O)Y and -C(S)Y where Y is selected from the group consisting of

(a) alkyl or cycloalkyl,

(b) substituted alkyl with the proviso that the substitution on said substituted alkyl do not include α-haloalkyl, α-diazoalkyl, α-OC(O)alkyl, or

α-OC(O)aryl groups,

(c) alkoxy or thioalkoxy,

(d) substituted alkoxy or substituted thioalkoxy,

(e) hydroxy,

(f) aryl,

(g) heteroaryl,

(h) heterocyclic,

(i) -NR′R″ where R′ and R″ are independently selected from hydrogen, alkyl, alkenyl, alkynyl, substituted alkyl, substituted alkenyl, substituted alkenyl, cycloalkyl,

aryl, heteroaryl, heterocyclic, where one of R′ or R″ is hydroxy or alkoxy, and where R′ and R″ are joined to form a cyclic group having from 2 to 8 carbon atoms optionally containing 1 to 2 additional heteroatoms selected from oxygen, sulfur and nitrogen and optionally substituted with one or more alkyl, alkoxy or carboxylalkyl groups,

(j) -NHSO2-R^8 where R^8 is selected from alkyl, substituted alkyl, alkenyl, substituted alkenyl, cycloalkyl, aryl, heteroaryl and heterocyclic,

(k) -$NR^9NR^{10}R^{10}$ where R^9 is hydrogen or alkyl, and each R^{10} is independently selected from hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, cycloalkyl, aryl, heteroaryl, heterocyclic, and

(l) -$ONR^9[C(O)O]_zR^{10}$ where z is zero or one, R^9 and R^{10} are as defined above;

X can also be -CR^6R^6Y' where each R^6 is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, cycloalkyl, aryl, heteroaryl and heterocyclic and Y′ is selected from the group consisting of hydroxyl, amino, thiol, alkoxy, substituted alkoxy, thioalkoxy, substituted thioalkoxy, -$OC(O)R^7$, -SSR^7, -$SSC(O)R^7$ where R^7 is selected from the group consisting of alkyl, substituted alkyl, cycloalkyl, aryl, heteroaryl and heterocyclic,

X′ is hydrogen, hydroxy, or fluoro;

X″ is hydrogen, hydroxy or fluoro, or X′ and X″ together form an oxo group,

Z is selected from the group consisting of a bond covalently linking R^1 to -CX′X″-, oxygen and sulfur;

n is an integer equal to 1 or 2; and

pharmaceutically acceptable salts thereof

with the provisos that:

A. when R^1 is phenyl or 3-nitrophenyl, R^2 is methyl, R^3 is hydrogen, R^4 is -CH(OH)CH^3, R^5 is hydrogen, X′ and X″ are hydrogen, Z is a bond, and *n* is 1, then X is not -C(O)OH;

B. when R^1 is phenyl, R^2 is methyl, R^3 is hydrogen, R^4 is -$CH(OH)CH_3$ derived from D-threonine, R^5 is hydrogen, X′ and X″ are hydrogen, Z is a bond, and *n* is 1, then X is not -C(O)OH or -$C(O)OCH_3$;

C. when R^1 is phenyl, R^2 is methyl, R^4 is benzyl, R^5 is hydrogen, X is methoxycarbonyl, X′ and X″ are hydrogen, Z is a bond, and *n* is 1, then R^3 is not methyl;

D. when R^1 is *iso*-propyl, R^2 is -$CH_2C(O)NH_2$, R^3 is hydrogen, R^4 is *iso*-butyl, R^5 is hydrogen, X′ and X″ are hydrogen, Z is a bond, and *n* is 1, then X is not -$C(O)OCH_3$;

E. when R^1 is phenyl, R^2 is methyl, R^5 is hydrogen, X is -$C(O)OCH_3$, X′ and X″ are hydrogen, Z is a bond, and *n* is 1, then R^3, the nitrogen atom attached to R^3, and R^4 do not form 1,2,3,4-tetrahydroiso-quinolin-2-yl or pyrrolidin-2-yl;

F. when R^1 is phenyl, R^2 is methyl, R^3 is hydrogen, R^5 is hydrogen, X is -$C(O)OCH_3$, X′ and X″ are hydrogen, Z is a bond, and *n* is 1, then R^4 is not 4-amino-n-butyl;

G. when R^1 is 3-nitrophenyl, R^2 is methyl, R^3 is hydrogen, R^4 is -$CH(OH)CH_3$, R^5 is hydrogen, X′ and X″ are hydrogen, Z is a bond, and *n* is 1, then X is not -$C(O)NH_2$ or -CH_2OH;

H. when R^1 is phenyl, R^2 is methyl, R^3 is hydrogen, R^5 is hydrogen, X is -CH_2OCH_3, X′ and X″ are hydrogen, Z is a bond, and *n* is 1, then R^4 is not benzyl or ethyl;

I. when R^1 is *3,5*-difluorophenyl, R^2 is methyl, R^3 is methyl, R^4 is methyl, R^5 is hydrogen, X′ and X″ are hydrogen, Z is a bond, and *n* is 1, then X is not -CHOHφ;

J. when R^1 is *3,5*-difluorophenyl, R^2 is methyl, R^3 is hydrogen, R^4 is phenyl derived from D-phenylglycine, R^5 is hydrogen, X′ and X″ are hydrogen, Z is a bond, and *n* is 1, then X is not -CHOHφ or -CH2OH;

K. when R^1 is *N*-(2-pyrrolidinonyl), R^2 is methyl, R^3 is hydrogen, R^4 is benzyl, R^5 is hydrogen, X′ and X″ are hydrogen, Z is a bond, and *n* is 1, then X is not -C(O)OCH_3;

L. when R^1 is 3,5-difluorophenyl, R^2 is methyl derived from D-alanine, R^3 is hydrogen, R^4 is phenyl derived from D-phenylglycine, R^5 is hydrogen, X′ and X″ are hydrogen, Z is a bond, and *n* is 1, then X is not -C(O)NH-benzyl;

M. when R^1 is *3,5*-difluorophenyl, R^2 is methyl, R^3 is hydrogen, R^4 is hydrogen, R^5 is hydrogen, X′ and X″ are hydrogen, Z is a bond, and *n* is 1, then X is not -CH_2OH;

N. when R^1 is *3,5*-difluorophenyl, R^2 is methyl, R^3 is hydrogen, R^4 is 4-phenylphenyl, R^5 is hydrogen, X′ and X″ are hydrogen, Z is a bond, and *n* is 1, then X is not -C(O)$NHC(CH_3)_3$; and

O. when R^1 is *3,5*-difluorophenyl, R^2 is methyl, R^3 is hydrogen, R^4 is phenyl derived from D-phenylglycine, R^5 is hydrogen, X′ and X″ are hydrogen, Z is a bond, and *n* is 1, then X is not -C(O)$NHCH(CH_3)$φ.

Claims 2-89 (Canceled)